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- (71) Applicant (for all designated States except US):
CHAMELEON MEDICAL INNOVATION LTD.?
[IL/IL]; 2 Hamelacha St., 71520 Lod (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **ROGERS, Steven, R.?** [US/IL]; 49 Moshav Beit Gamliel, D.N. Emek Sorek, 76880 Moshav Beit Gamliel (IL). **LEIBOVITZ, Allon?**

[IL/IL]; 17 Emek Ayalon Street, 73142 Shoham (IL). **SHA-HAR, Menashe?** [IL/IL]; Drom Hagolan, 12391 Korazim (IL). **DESHEN, Eliezer?** [IL/IL]; 104 Moshav Beit Gamliel, D.N. Emek Sorek, 76880 Moshav Beit Gamliel (IL). **SHECHTER, Yossi?** [IL/IL]; 37 Mohaliver Street, 58348 Holon (IL).

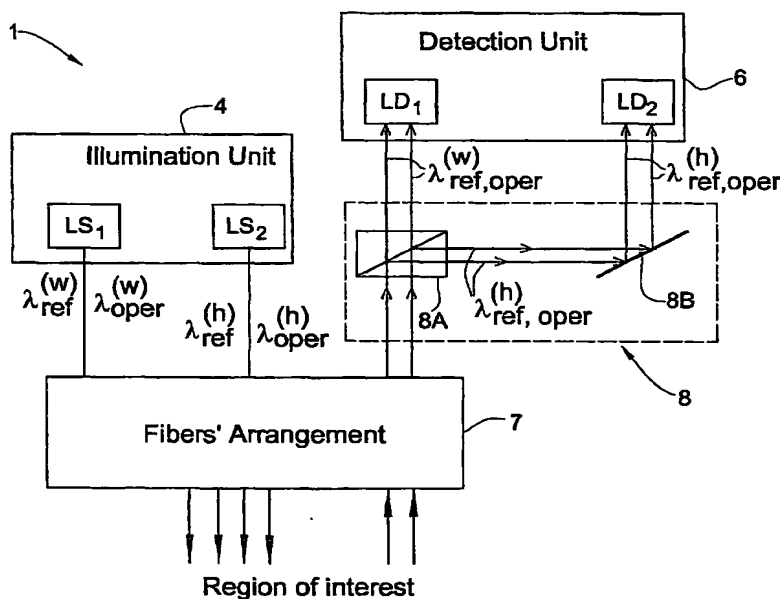
(74) Agent: **REINHOLD COHN AND PARTNERS**; P.O.B. 4060, 61040 Tel-Aviv (IL).

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(54) Title: MEASUREMENT SYSTEM AND METHOD FOR USE IN DETERMINING THE PATIENT'S CONDITION



(57) Abstract: A measurement system and method are presented for use in detecting a predetermined condition of a patient's ear indicative of a certain disease such as SOM and SOM. The system comprises an optical measuring unit and a control unit connectable to the output of the measuring unit. The optical measuring unit is configured and operable for irradiating a region of interest in a patient's ear with incident light including at least two different wavelengths, detecting light responses of the region of interest to said at least two different wavelengths, and producing measured data indicative thereof. The at least two different wavelengths are selected such that the light response of the region of interest to at least one first wavelength is substantially independent of said predetermined condition and the light response to at least one second wavelength is affected by said predetermined condition. The control unit is operable for receiving and processing the measured data to

generate output data indicative of the measurement results. The control unit is configured and operable for controlling operation of the optical measuring unit, and for receiving the measured data and processing it to generate output data indicative of whether or not said predetermined condition exists. The control unit comprises a memory utility for storing predetermined reference data indicative of the light response of the region of interest while in a healthy condition of a patient's ear; a data processing and analyzing utility preprogrammed for processing and analyzing the measured data by determining a relation between the measured light responses and the corresponding reference data.

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